

David C. Hovda et al  
Application No.: 10/656,597  
Response to Office Action of April 20, 2006  
Page 2 of 8

Docket No.: S-12

RECEIVED  
CENTRAL FAX CENTER

JUL 19 2006

IN THE CLAIMS

For the convenience of the Examiner, all pending claims of the Application are reproduced below.

1-26. (PREVIOUSLY WITHDRAWN)

27. (ORIGINAL) An electrosurgical device for use with a high-frequency power supply, the device comprising:

a shaft having a proximal portion and a distal portion;

a return electrode at the distal portion of the shaft and having a return electrode surface area, the return electrode distally terminating in a tip portion;

at least one active electrode at the distal portion of the shaft, and having an active electrode surface area, the active electrode further comprising an arm portion being radially spaced from the return electrode, wherein the tip portion of the return electrode is distally spaced from the arm portion of the active electrode; and

a connector located at the proximal portion of the shaft and adapted to couple the return electrode and each active electrode to respective poles of the high-frequency power supply.

28. (ORIGINAL) The electrosurgical device of claim 27, wherein the return electrode surface area is greater than the active electrode surface area.

29. (ORIGINAL) The electrosurgical device of claim 27, wherein at least part of the tip portion comprises a shape selected from a group consisting of a sphere, a semi-sphere, oblate sphere, and prolate sphere.

30. (ORIGINAL) The electrosurgical device of claim 27, wherein a portion of the return electrode comprises at least one segment having a raised surface, whereby the raised surfaces increase the return electrode surface area.

31. (ORIGINAL) The electrosurgical device of claim 30, wherein the at least one segment having the raised surface comprises a coil adjacent to the tip portion.

David C. Hovda et al  
Application No.: 10/656,597  
Response to Office Action of April 20, 2006  
Page 3 of 8

Docket No.: S-12

32. (ORIGINAL) The electrosurgical device of claim 27, wherein the at least one active electrode comprises at least a first and a second active electrode.
33. (ORIGINAL) The electrosurgical device of claim 32, wherein the first and second active electrodes are spaced 180 degrees on the device.
34. (ORIGINAL) The electrosurgical device of claim 32, wherein a span between the arm portion of the first active electrode and the arm portion of the second active electrode is at least 3 mm.
35. (ORIGINAL) The electrosurgical device of claim 27, wherein at least the arm portion of the active electrode is adapted to deform such that the device may assume a reduced profile.
36. (ORIGINAL) The electrosurgical device of claim 35, wherein at least the arm portion of the active electrode is elastically deformable.
37. (ORIGINAL) The electrosurgical device of claim 35, wherein at least a portion of the active electrode comprises a shape memory alloy such that the arm portion of the active electrode may return from the reduced profile upon application heat.
38. (ORIGINAL) The electrosurgical device of claim 35, further comprising an electrode support physically connecting the return electrode to at least one of the active electrodes.
39. (ORIGINAL) The electrosurgical device of claim 38, wherein the return electrode and the active electrode are moveable relative to each other.
40. (ORIGINAL) The electrosurgical device of claim 27, further comprising an outer covering slidably moveable over the shaft and active electrode, and having an internal opening having a dimension smaller than a maximum radial distance from the active electrode arm portion to the return electrode.

David C. Hoyda et al  
Application No.: 10/656,597  
Response to Office Action of April 20, 2006  
Page 4 of 8

Docket No.: S-12

41. (ORIGINAL) The electrosurgical device of claim 27, wherein at least the active electrode arm portion comprises at least one section of reduced surface area adapted to produce a high current density.

42. (ORIGINAL) The electrosurgical device of claim 27, wherein at least the active electrode arm portion comprises a cross-sectional shape selected from the group consisting of a d-shape, a square shape, a rectangular shape, a triangular shape, a circular shape, and an oval shape.

43. (ORIGINAL) The electrosurgical device of claim 27, further comprising a hub at a proximal end of the shaft, wherein the connector comprises a cable and is integral to the hub.

44. (ORIGINAL) The electrosurgical device of claim 27, wherein the hub comprises a handle.

45. (ORIGINAL) An electrosurgical system for treating tissue with a high-frequency power supply, the system comprising:

a source of electrically conductive medium;

an electro surgical device for use with the high-frequency power supply, the device comprising,

a shaft having a proximal portion and a distal portion;

a return electrode at the distal portion of the shaft and having a return electrode surface area, the return electrode having a tip portion;

at least one active electrode at the distal portion of the shaft, and having an active electrode surface area, the active electrode further comprising an arm portion being radially spaced from the return electrode, wherein the tip portion of the return electrode is distally spaced from the arm portion of the active electrode; and

a connector located at the proximal portion of the shaft and adapted to couple the return electrode and each active electrode to respective poles of the high-frequency power supply; and

wherein the source of electrically conductive medium provides an electrically

David C. Hovda et al  
Application No.: 10/656,597  
Response to Office Action of April 20, 2006  
Page 5 of 8

Docket No.: S-12

conductive medium which completes a circuit between the return electrode and the active electrode.

46. (PREVIOUSLY WITHDRAWN)

47. (NEW) An electrosurgical device for use with a high-frequency power supply, the device comprising:

a shaft having a proximal portion and a distal portion;

a return electrode at the distal portion of the shaft and having a return electrode surface area, the return electrode distally terminating in a tip portion;

at least one active electrode at the distal portion of the shaft, and having an active electrode surface area, the active electrode further comprising an arm portion being radially spaced from the return electrode; and

a connector located at the proximal portion of the shaft and adapted to couple the return electrode and each active electrode to respective poles of the high-frequency power supply.